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In re application of:

Hannigan et al.

Application No.: 09/709,255

Filed: November 8, 2000

For: METHODS AND SYSTEMS FOR
READ-ALoud BOOKS

Examiner: A. Rada

Date: December 11, 2003

Art Unit 3714

Confirmation No. 3458

CERTIFICATE OF MAILING

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APPEAL BRIEF 09/709,255

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I. REAL PARTY IN INTEREST

The real party in interest is Digimarc Corporation, by an assignment from the inventors recorded at Reel 11799, Frames 381-2, on May 14, 2001.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-22 stand finally rejected and appealed.

The pending claims are presented at the end of this Brief.

IV. STATUS OF AMENDMENTS

The amendments *to the claims and inventorship* (March 20, 2003) have been entered. However, amendments in the same document directed to the specification (*i.e.*, bodily inserting text from the incorporated-by-reference parent specification) were objected to as introducing new matter.

Normally, such an objection would be the subject of a petition rather than an appeal. However, where – as here – the alleged new matter affects the claims (*i.e.*, serving as the basis for a Section 112, paragraph 1 rejection), then the new matter question is understood to be appealable.¹

V. SUMMARY OF THE INVENTION

Applicants' invention relates to the use of steganography in contexts such as stuffed toys and children's books, to provide enhanced functionality and new features.

¹ MPEP 608.04(c).

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Steganography is the science of hiding secret information in some other data without leaving any apparent evidence of data alteration.² Generally, the specification refers to a specific class of steganography known as "digital watermarking."³

Digital watermarking can take many forms - several are detailed in documents incorporated-by-reference in the present specification.⁴ One form of digital watermarking favored by the present Applicants involves making subtle changes to the luminance of pixels comprising an image (e.g., in a book) to thereby encode a hidden multi-bit auxiliary data payload. The changes are too slight to be perceptible to human viewers of the modified image. But when such a watermark-encoded image is captured and computer analyzed, the multi-bit payload can be recovered. Thus, a digital watermark can serve as machine-readable data that can be printed using conventional printing techniques, yet is essentially invisible to humans.

As is familiar, children learn the mechanics of turning book pages at an early age. They enjoy looking at pictures on pages, and hearing any accompanying text read-aloud. Many children have favorite books that they like to hear read over and over again. The association of seeing pictures and repeatedly hearing the words is an excellent mechanism for learning to read and learning to enjoy books.⁵

In accordance with one aspect of the invention, these childhood reading experiences are complemented through use of machine-readable digital watermark data in books that permit children to hear the text of a book even when an adult is not available to assist them.⁶

More particularly, according to one aspect (e.g., claim 2), the invention is a method that includes sensing a page or cover of a children's book with an image sensor.⁷ Image data produced by the sensor is then processed to decode a digital watermark.⁸ Based on the results of

² Steganography is a well developed art that is not belabored in the present specification. Instead, the present specification incorporates-by-reference earlier patents and applications on the subject. *See, e.g.*, references to other works at page 1, lines 4-6, and at page 4, line 22; and the incorporation by reference language at page 4, lines 23-24.

³ Specification, page 1, lines 22-23; page 4, lines 4, 7 and 20-22;

⁴ Specification, page 1, lines 4-6; page 4, line 22; and the incorporation by reference language at page 4, lines 23-24.

⁵ Specification, page 1, lines 13-17.

⁶ Specification, page 1, lines 18-21.

⁷ E.g., specification, page 2, line 16.

⁸ E.g., specification, page 2, lines 17-18.

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the decoding, an action associated with the sensed page is triggered (e.g., digitized speech corresponding to text on the page is rendered for a child to hear).⁹

According to another aspect of the invention (e.g., claim 5), the speech that is rendered to the child is synthesized from component utterances (e.g., common words and phonemes) that are previously recorded by a parent. By such arrangement, a child can hear a story read by a familiar voice, even if that person has never before seen the book.¹⁰

According to further aspects of the invention (e.g., claims 11-14), the rendered narration associated with a book need not be a verbatim recitation of its text. Instead, a user can provide a vocabulary of place and people names, and these new names can be substituted into the story, customizing the book text to a particular child or locale.¹¹

The action triggered by sensing of watermark is not limited to rendering of speech. Alternatives include retrieving artwork from a data store and printing same for coloring by a child,¹² linking to an interactive internet game related to the book,¹³ or playing a corresponding excerpt of a DVD video.¹⁴ In this latter case, pages of a book can serve as indices to a DVD's contents. (E.g., if a child wants to view an excerpt of the Harry Potter video where Harry fights the dragon, that page of the book can be shown to an image sensor. The computer decodes a watermark from that page and instructs a DVD player associated with the system to advance to a corresponding frame number and begin playing.)¹⁵

According to further aspects of the invention (e.g., claims 15-19), the triggered response can also depend on gestures.

For example, the rendered speech from one page can instruct the child, "If you want the Cat in the Hat to open mother's closet door, move the book up and down. If you want the Cat in the Hat to stay out of mother's closet, move the book from side to side." The computer can

⁹ E.g., specification, page 2, lines 18-24.

¹⁰ Specification, page 6, lines 20-29.

¹¹ Specification, page 3, lines 10-18.

¹² Specification, page 3, lines 1-2.

¹³ Specification, page 5, line 14.

¹⁴ Specification, page 4, lines 1-6.

¹⁵ *Ibid.*

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detect such gestures from the image data, and invoke different actions (e.g., tell different story lines, or present different video accompaniment) accordingly.¹⁶

Additionally, sensed gestures can be used to control speed of reading, reading volume, reading voice, etc.¹⁷

Another aspect of the invention (claim 1) is a stuffed toy that is equipped with an image sensor, a processor, and a speaker. The processor operates to sense a digital watermark encoded on an object presented to the toy, and trigger a corresponding action in response (e.g., reading a page of a book).¹⁸

Another aspect of the invention (claim 21) is a method in which a child is provided with a book in which each of plural pages is steganographically encoded with different data. The child presents a first page of the book to a reading station (comprising a processor, optical scanner, memory and speaker), which responds by voicing data associated with that page. The child then turns to a further page of the book and presents same to the reading station. The reading station again responds by voicing data associated with that different page.¹⁹

Another aspect of the invention (claim 22) is a children's book having at least first and second pages steganographically encoded with different plural bit data. The first encoded data serves to index first digitized auditory information, and the second encoded data serves to index second digitized auditory information.²⁰

(The Detailed Description section of the originally-filed specification²¹ spans six double-spaced pages. In view of its conciseness, the Board is invited to review same in its entirety for additional information.)

¹⁶ Specification, page 3, lines 25-30.

¹⁷ Specification, page 7, lines 16-22.

¹⁸ Specification, page 2, lines 9-24.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ In the sole amendment (March 20, 2003), applicants bodily inserted from the parent application certain disclosure relating to sensing gestures, into the present specification.

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VI. ISSUES

1. Did the insertion of text into the specification from a co-pending application - when that co-pending application was explicitly incorporated-by-reference with the original application - constitute new matter?

2. Did the Office establish *prima facie* obviousness of claims 1-22 over Diamond (5,314,336) in view of Rhoads (6,311,214) when the cited references - collectively - do not teach or suggest limitations required by these claims, and fail to suggest the selective modifications and combinations needed to yield the claimed combinations?

VII. GROUPING OF CLAIMS

Claim 3 stands or falls with claim 2.

Each of the other claims is independently patentable, for reasons detailed below.

VIII. ARGUMENT

Diamond is understood to disclose a doll with an IR light source and corresponding optical sensor, which recognizes certain object markings, and voices a word, phrase, or sentence in response.

As detailed below, Diamond is not understood to disclose much of the subject matter for which the Office cites it.

Rhoads is one of the present assignee's prior patents, and concerns digital watermarking/steganography.

In the following discussion, the shortcomings of the Examiner's rejections are considered for each of the claims. The last section of the discussion addresses a failing that is common to all of the appealed obviousness rejections: the Examiner's failure to present a cognizable rationale motivating an artisan to modify and combine the references in the manner asserted.

1. Claim 1

The rejection of claim 1 fails because Diamond does not include teachings for which the Examiner cites it.

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For example, the Final Action wrongly states "*Diamond discloses ... an image sensor having a two dimensional array of optical sensing elements.*"²²

It does not. Diamond teaches only a single infrared photocell 45.²³

Accordingly, a *prima facie* case under Section 103 has not been made out by the Examiner's Final Action. As such, further points concerning this claim are not belabored.

2. Claim 2

Like claim 1, the rejection of claim 2 fails because Diamond does not include teachings for which the Examiner cites it.

Again, the Examiner wrongly cites Diamond as disclosing an image sensor having a two-dimensional array of optical sensing elements.²⁴ Again, it does not.

Again, this is not the only failing of the rejection. For example, claim 2 further requires decoding a digital watermark from image data corresponding to a page or cover of a children's book.

Neither Diamond nor Rhoads teaches decoding a digital watermark from a page or cover of a children's book.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

3. Claim 3

Claim 3 stands or falls with independent claim 2.

4. Claim 4

Claim 4 depends from claim 3, which depends from independent claim 2.

In addition to the above-noted deficiencies of the rejection of claim 2, claim 4 is independently patentable.

²² Final Action, bottom of page 4.

²³ Diamond, 5,314,336, Fig. 4, #45; col. 2, line 68.

²⁴ Final Action, bottom of page 4.

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Claim 4 requires that the speech is assembled from component phonemes or common words previously recorded by a person.

In characterizing the teachings of Diamond the Examiner wrongly states, "...*the speech is assembled from component phonemes or common word recorded by a person (child or child's family member) as recited in claims 4 and 5...*"²⁵

Diamond contains no such teaching. (Despite applicants' noting this issue in the first amendment, the Examiner failed to provide any citation to support his assertion.)

In characterizing the teachings of Rhoads the Examiner again wrongly states, "...*the speech is assembled from component phonemes or common word recorded by a person (child or child's family member) as recited in claims 4 and 5...*"²⁶

Again, Rhoads contains no such teaching.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

5. Claim 5

Claim 5 depends from claim 4. In addition to the above-noted deficiencies of the rejection of claim 4, claim 5 is independently patentable.

Claim 5 requires that the component phonemes or common words (1) are stored locally, and (2) correspond to a child or a child's family member.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitations.²⁷ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.²⁸ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

²⁵ Final Action, page 5, lines 3-5.
²⁶ Final Action, page 5, lines 20-22.
²⁷ Final Action, page 5, lines 3-5, 20-22.
²⁸ Amendment, March 20, 2003, page 12, lines 1-2.

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6. Claim 6

Claim 6 also depends from claim 4. In addition to the above-noted deficiencies of the rejection of claim 4, claim 6 is independently patentable.

Claim 6 requires that the component phonemes or common words (1) are stored remotely, and (2) corresponding to a celebrity voice.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitations.²⁹ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.³⁰ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

7. Claim 7

Claim 7 is dependent from claim 2. In addition to the above-noted failings of the rejection of claim 2, claim 7 is independently patentable.

Claim 7 specifies that the action triggered by the children's book page or cover is playback of music.

In this case, the Examiner did *not* assert that the references taught such limitation. (The references include no teaching of this feature.) Instead, such feature – and claim 7 – were not specifically addressed in the Final Action.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

8. Claim 8

Claim 8 is dependent from claim 2. In addition to the above-noted failings of the rejection of claim 2, claim 8 is independently patentable.

Claim 8 specifies that the action triggered by the children's book page or cover is retrieving artwork from a data store, and printing said artwork for coloring by a child.

²⁹ Final Action, page 5, lines 5-6, 22.

³⁰ Amendment, March 20, 2003, page 12, lines 3-4.

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Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitations.³¹ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.³² Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

9. Claim 9

Claim 9 is also dependent from claim 2. In addition to the above-noted failings of the rejection of claim 2, claim 9 is independently patentable.

Claim 9 specifies that the action triggered by the children's book page or cover is linking to an internet web site related to the book or its subject matter.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitation.³³ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.³⁴ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

10. Claim 10

Claim 10 is also dependent from claim 2. In addition to the above-noted failings of the rejection of claim 2, claim 10 is independently patentable.

Claim 10 specifies that the action triggered by the children's book page or cover is linking to an interactive multiplayer game related to the book or its subject matter.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitation.³⁵ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.³⁶ Again, the Examiner did not.

³¹ Final Action, page 5, lines 6-7; page 6, line 1.

³² Amendment, March 20, 2003, page 12, lines 5-6.

³³ Final Action, page 5, line 7; page 6, line 2.

³⁴ Amendment, March 20, 2003, page 12, line 7.

³⁵ Final Action, page 5, line 8; page 6, line 3.

³⁶ Amendment, March 20, 2003, page 12, lines 8-9.

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Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

11. Claim 11

Claim 11 is also dependent from claim 2. In addition to the above-noted failings of the rejection of claim 2, claim 10 is independently patentable.

Claim 11 specifies that the action triggered by the children's book page or cover is speech, where the speech incorporates both text from the book, as well as substitute words.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitation.³⁷ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.³⁸ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

12. Claim 12

Claim 12 depends from claim 11. In addition to the above-noted failings of the rejection of claim 11, claim 12 is independently patentable.

Claim 12 specifies that the method includes retrieving the substitute words from a local store.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitation.³⁹ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.⁴⁰ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

³⁷ Final Action, page 5, line 9; page 6, line 4.

³⁸ Amendment, March 20, 2003, page: 12, line 10.

³⁹ Final Action, page 5, line 10; page 6, line 5.

⁴⁰ Amendment, March 20, 2003, page: 12, line 11.

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13. Claim 13

Claim 13 is also dependent from claim 11. In addition to the above-noted failings of the rejection of claim 11, claim 13 is independently patentable.

Claim 13 specifies that the method includes soliciting words from a child, recording the child's words, and using said recorded words as the substitute words.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitations.⁴¹ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.⁴² Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

14. Claim 14

Claim 14 is also dependent from claim 11. In addition to the above-noted failings of the rejection of claim 11, claim 14 is independently patentable.

Claim 14 specifies that the substitute words customize the book text to a particular child or locale.

Again, the Examiner wrongly asserts that both Diamond and Rhoads teach such limitation.⁴³ Again, they do not. Again, applicants invited the Examiner to provide a citation to such features.⁴⁴ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

15. Claims 15-20

Claim 15 depends from claim 11, and specifies that the method further includes sensing a gesture from the image data, and controlling the action (of claim 2) in accordance therewith.

Claims 16-20 depend from claim 15 and introduce further limitations relating to the gesture functionality.

⁴¹ Final Action, page 5, lines 10-12; page 6, lines 5-6.

⁴² Amendment, March 20, 2003, page 12, lines 12-13.

⁴³ Final Action, page 5, lines 12-13; page 6, line 7.

⁴⁴ Amendment, March 20, 2003, page 12, lines 14-15.

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These claims were included with all of the others that were rejected over Diamond and Rhoads.

As with all the other claims, the Examiner made the unsupported assertion that such claim features are taught by both Diamond and Rhoads.⁴⁵

Again, the cited art has no teaching on such limitations. Again, applicants invited the Examiner to provide citations to such alleged teachings.⁴⁶ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning these claims *vis a vis* the prior art are not belabored.

These claims were also rejected under Section 112, paragraph 1 – based on the Examiner's view that the specification as originally filed did not provide the requisite support.

As pointed out in Applicants' first amendment, support for these claims is found in parent application 09/571,422. (For convenience of readers of the patent issuing from the present specification, Applicants bodily incorporated relevant excerpt into the present specification – an amendment that the Examiner objected to as new matter.) That parent application was expressly incorporated-by-reference into the present application by language found at page 4, lines 24-25 of the specification, where Applicants stated:

To provide a comprehensive disclosure without unduly lengthening this specification, the above-cited patent applications are incorporated herein by reference.

Ex parte Schwarze, 151 USPQ 426 (Bd. App. 1966) and MPEP 608.01(p) establish that it is permissible to incorporate essential material by reference.⁴⁷

If an incorporated-by-reference *application* is still pending at the time the subject application is ready for issuance, the Examiner should require that any essential excerpts be bodily copied into the subject application. In the present case, Applicants foresaw that the incorporated-by-reference parent application may not be issued by the time the present application is allowed. Accordingly, Applicants took the step of bodily incorporating relevant passages into the present specification.⁴⁸

⁴⁵ Final Action, page 5, lines 13-14; page 6, lines 8-9.

⁴⁶ Amendment, March 20, 2003, page 12, lines 16-20.

⁴⁷ See also MPEP Section 2163.07(b).

⁴⁸ Amendment, filed March 20, 2003.

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It is error for the Examiner - as he has done here - to refuse to consider incorporated-by-reference patent documents in considering enablement under Section 112. Accordingly, the associated new matter objection and enablement rejections should be reversed.

16. Claim 20

Claim 20 is dependent from claim 2. In addition to the earlier-noted failings of the rejection of claim 2, claim 20 is independently patentable.

Claim 20 specifies that the action triggered by the children's book page or cover is starting playback of a video at a point corresponding to the page or cover.

Again, contrary to the Examiner's assertion, neither reference teaches such limitation. Again, applicants invited the Examiner to provide a citation to such feature.⁴⁹ Again, the Examiner did not.

Again, a *prima facie* case under Section 103 has not been established, so further points concerning this claim are not belabored.

17. Claim 21

Claim 21 is an independent claim detailing a child-directed, automated, read-aloud method. The claim spans 18 lines in the attached Appendix, and is rife with detail.

In the Final Rejection, the Examiner abridged this claim (together with claim 22) to less than four lines,⁵⁰ and asserted that such abridged elements are found in the cited references.

A *prima facie* rejection is not thereby established.

As to at least some of the abridged elements cited by the Examiner, the art does not teach what he says it teaches. For example, contrary to the Examiner's statement, Diamond does not teach a processor decoding visible light scan data.⁵¹ Nor does Rhoads teach accessing stored voice data from memory in accordance with plural bit data from a book.⁵²

Moreover, the abridgement of a detailed claim down to a few generalities wrongly ignores many of the claim's limitations.

⁴⁹ Amendment, March 20, 2003, page 12, line 21.

⁵⁰ Final Action, page 5, lines 14-18; page 6, lines 9-12.

⁵¹ Final Action, page 5, line 16.

⁵² Final Action, page 6, lines 11-12.

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Again, the Examiner's summary treatment does not rise to a *prima facie* case under Section 103, so further points concerning this claim are not belabored.

18. Claim 22

Claim 22 is an independent claim drawn to a children's book:

22. *A children's book comprising plural pages, one of said pages being steganographically encoded with first plural bit data, and another of said pages being steganographically encoded with second, different, plural bit data, said steganographic encoding not being apparent to human observers of the pages, but can be decoded from image data produced by visible light scanning of said pages, wherein the first and second plural-bit data serves to index first and second digitized auditory information, respectively.*

Again, the Examiner dismisses the limitations of this claim as all being taught by Diamond and Rhoads.⁵³ Again, the Examiner is factually mistaken.

For example, contrary to the Examiner's statement, Diamond does not teach a processor decoding visible light scan data.⁵⁴ Nor does Rhoads teach accessing stored voice data from memory in accordance with plural bit data from a book.⁵⁵

Since the final rejection is premised on errors of fact, a *prima facie* case is not thereby established, so further points concerning this claim are not belabored.

19. Motivation to Combine

A rejection under Section 103 cannot stand absent a sufficient statement of a motivation to modify and combine the references to yield the claimed invention.

The Final Rejections have failed on this point.

The sole statement offered in support of the motivation to modify and combine the cited art - so as to yield each of the 22 claims of the present application - is the following:

⁵³ Final Action, page 5, lines 14-18; page 6, lines 9-12.

⁵⁴ Final Action, page 5, line 16.

⁵⁵ Final Action, page 6, lines 11-12.

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By having a steganographic watermark, one of ordinary skill in the art would be able to fully interactive toy.³⁶

The Board will recognize that such a rationale is wholly insufficient to support the Examiner's 22 claim rejections.

Again, each of the rejections has failed to meet the statutory requirements, and must be reversed.

IX. CONCLUSION

In view of the foregoing, the rejections of claims 1-22 should each be reversed, and the case should be remanded to the Examiner with instructions to pass the case to issuance.

Date: December 11, 2003

Customer Number 23735

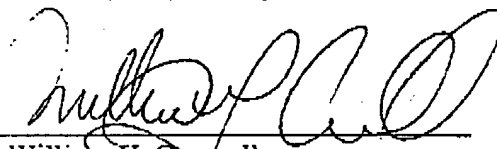
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Respectfully submitted,

DIGIMARC CORPORATION

By



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Registration No. 31,943

³⁶

Final Action, page 6, lines 13-14.

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APPENDIX - PENDING CLAIMS

1. (Original) A system comprising:
 - a stuffed toy having two eyes and an image sensor therein, the sensor comprising a two-dimensional array of optical sensing elements, and being positioned to view out of at least one of said eyes;
 - a speaker; and
 - a processor coupled to said image sensor and speaker, the processor comprising a steganographic watermark detector for sensing steganographic watermark data on an object presented to the stuffed toy and triggering an action in response.
2. (Original) A method comprising:
 - sensing a page or cover of a children's book with an image sensor, the sensor comprising a two-dimensional array of optical sensing elements;
 - decoding a digital watermark from image data produced by the image sensor; and
 - triggering an action associated with said page or cover.
3. (Original) The method of claim 2 wherein said action is speech reciting text from said book.
4. (Original) The method of claim 3 wherein said speech is assembled from component phonemes or common words previously recorded by a person.
5. (Original) The method of claim 4 wherein said component phonemes or common words are stored locally, and correspond to a child or a child's family member.
6. (Original) The method of claim 4 wherein said component phonemes or common words are stored remotely, and correspond to a celebrity voice.

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7. (Original) The method of claim 2 wherein said action is playback of music.
8. (Original) The method of claim 2 wherein said action is retrieving artwork from a data store, and printing said artwork for coloring by a child.
9. (Original) The method of claim 2 wherein said action is linking to an internet web site related to said book or its subject matter.
10. (Original) The method of claim 2 wherein said action is linking to an interactive multiplayer game related to said book or its subject matter.
11. (Original) The method of claim 2 wherein the action is speech, and the speech incorporates both text from the book, and substitute words.
12. (Original) The method of claim 11 that includes retrieving said substitute words from a local store.
13. (Original) The method of claim 11 that includes soliciting words from a child, recording the child's words, and using said recorded words as said substitute words.
14. (Original) The method of claim 11 wherein said substitute words customize the book text to a particular child or locale.
15. (Original) The method of claim 11 that further includes sensing a gesture from the image data, and controlling said action in accordance therewith.
16. (Original) The method of claim 15 wherein one gesture causes a page from the book to be read-aloud again.

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17. (Original) The method of claim 15 wherein one gesture controls volume of audio delivered to a speaker.

18. (Original) The method of claim 15 wherein one gesture causes text from the book to be read-aloud at a faster speed.

19. (Original) The method of claim 15 wherein one gesture causes text read-aloud from the book to be read using a different voice.

20. (Previously Amended) The method of claim 2 that further comprises starting playback of a video at a point corresponding to said page or cover.

21. (Previously Presented) A method comprising:

providing a book to a child, the book comprising printed pages, each page being steganographically encoded with plural bit data, one page being encoded with first plural bit data and a further page being encoded with second plural bit data different than the first plural bit data;

the child presenting said one page of the book to a reading station, the reading station including a processor, an optical scanner, a memory, and a speaker, the scanner providing visible light scan data to the processor; the processor decoding said visible light scan data to decode the first plural bit data, the processor accessing stored voice data from the memory in accordance with said decoded first plural bit data, and causing said stored voice data to be rendered using said speaker;

the child turning to said further page of the book, and presenting said further page to the reading station, the processor of the reading station decoding visible light scan data corresponding to said further page to decode the second plural bit data, and accessing different stored voice data from the memory in accordance with said decoded second plural bit data, and causing said different stored voice data to be rendered using said speaker;

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wherein the child controls an automated read-aloud process, assisting the child in learning to read.

22. (Previously Presented) A children's book comprising plural pages, one of said pages being steganographically encoded with first plural bit data, and another of said pages being steganographically encoded with second, different, plural bit data, said steganographic encoding not being apparent to human observers of the pages, but can be decoded from image data produced by visible light scanning of said pages, wherein the first and second plural-bit data serves to index first and second digitized auditory information, respectively.